

NAVAL WAR COLLEGE  
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**Cooperative Sustainment: A Strategy for Focused Logistics**

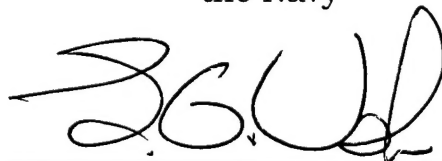
By

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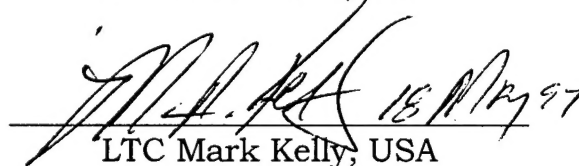
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The contents of this paper reflect my own personal views and are not  
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“The passing of the Cold War and the strategy we embraced to fight it, if nothing else, demands a fundamental rethinking of our supporting logistics strategy.”

Dr. Paul Kaminiski  
Under Secretary of Defense for Acquisition and  
Technology, October, 31 1995

## **Introduction**

Perhaps now, more than any time in our recent history, the emergence of a new world order marks an era of profound change for our military strategy. “Gone is the bi-polar world influenced and kept in check by the United States and the Soviet Union. In its place is a new world shaped by a global multitude of generally ill-defined, but very real and unpredictable regional threats.”<sup>1</sup>

Our National Security Strategy that focused sharply on Containment and Deterrence of the Soviet Union now is focused broadly on Engagement and Enlargement of free market democracies.<sup>2</sup> The supporting National Military Strategy of flexible and selective engagement is centered on two objectives: Promoting Stability and Thwarting Aggression. From these two objectives spring forth twenty-two component functions that range from humanitarian assistance and

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<sup>1</sup> Lieutenant Colonel Ronald M. Janowski, USA, Material Development in the New World Order, Military Review, July 1993, p.38

<sup>2</sup> The White House, A National Security Strategy of Engagement and Enlargement (Washington DC: Government Printing Office 1996 )

peace keeping to nuclear deterrence and fighting two major regional contingencies.<sup>3</sup>

### Joint Vision 2010

The Joint Chiefs of Staff recently released Joint Vision 2010 -- a conceptual template for future forces. In it the Chairman of the Joint Chiefs of Staff, General John M. Shalikashvili, states that " The nature of modern warfare demands that we fight as a joint team. This was important yesterday, it is essential today, and will be even more imperative tomorrow. Joint vision provides an operationally based template for the evolution of the Armed Forces for the challenging and uncertain future. It must become the benchmark for Services and the Unified Command vision."<sup>4</sup>

Joint Vision 2010 outlines four operational concepts: dominate maneuver, precision engagement, full dimensional protection, and focused logistics that when effectively applied will achieve full spectrum dominance. As defined in the Joint Vision 2010, the operational concept of focused logistics is "the fusion of information, logistics, and transportation technologies to provide rapid crisis response, to track and shift assets even in route, and to deliver tailored logistics packages and sustainment directly at the strategic, operational, and tactical level of

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<sup>3</sup> Joint Chiefs of Staff, National Military Strategy of the United States of America (Washington D.C. Government Printing Office, 1996)

<sup>4</sup> General John M. Shalikashvili, Joint Vision 2010, p.2

operations.”<sup>5</sup> As the dynamics of military operations change, so must the dynamics of sustaining them.

Logistic sustainment plays a pivotal role in determining what is possible operationally, based on what is logistically supportable. In its broadest sense, logistic support is generated at the strategic level in the continental United States and flows through the operational level to operating forces at the tactical level in the theater of operations. The critical link in the timely and effective flow of strategic sustainment support is at the operational level. The concept of the Joint Chiefs of Staff is clear, but to make the concept of focused logistics a reality at the operational level of war requires a new sustainment strategy.

#### The Need for Change

The current vertical sustainment strategy of “just-in-case” logistics that has guided our logistics planning will not meet the future challenges inherent in our National Military Strategy.<sup>6</sup> Like it or not, the era of “just-in time” sustainment is here and a new strategy of Cooperative Sustainment -- the fusion of military and commercial capabilities -- is necessary to meet the sustainment challenges of today. A well developed strategy to achieve Cooperative Sustainment is required in order to build

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<sup>5</sup> Joint Chiefs of Staff, Joint Vision 2010, Washington D.C.: Government Printing Office, p.24

<sup>6</sup> Paul G. Kaminski, Under Secretary of Defense, Acquisition and Technology, “The Revolution in Defense Logistics” Defense Issues, November 1995, p.3

the strategic and operational framework required to achieve the intent of focused logistics as outlined in Joint Vision 2010.

### **The Sustainment Environment - Emerging Change**

Today the Services are wrestling with the costs of managing layers of slow moving inventory that is the result of a vertical sustainment strategy of the Cold War. That strategy focused on acquiring broad redundant levels of inventory. Commanders at all levels have expected and demanded that materiel purchased with their money be managed by their people and be held in their facilities for their command's consumption. Inventory to support day-to-day operations was layered with additional levels to meet anticipated requirements in the event the command went to war. The legacy of this multi-layered "just-in- case" strategy is felt now.

Today, as a result of "just-in-case" logistics, the Services' budget requests for inventory to meet daily operational requirements are constrained by the large quantity and dollar value of existing stocks on hand. The funding shortfall to acquire new inventory, compounded by the fact that much of the stock on hand is not stock that is critical to support current operations within the Services, adds to the problem.

To counter this problem the Department of Defense (DOD), under the direction of the Deputy Secretary of Defense (Logistics), has directed a significant effort to reduce the total DOD inventory. The inventory

reduction effort has largely focused on realignment of existing stocks across service boundaries to meet requirements throughout DOD. Since 1990 the DOD inventory reduction plan has reduced total inventories, measured in 1995 dollars, from 104 billion in 1990 to 76 billion in 1995. The trend line of annual decreases will be 4 to 5 billion dollars per year to the year 2001 when it will stabilize at about 55 billion.<sup>7</sup>

The effort to achieve this measured inventory reduction plan has required that the Services and the Defense Agencies take a critical re-look at traditional business processes used by DOD in planning for and managing inventory. To do this, DOD inventory managers began looking at private sector logistics for insight and solutions.

#### Military vs. Business Logistics

Logistics as a discipline is normally associated with military operations. The term itself connotes military science to the extent that military logistics is the only definition given by Webster.<sup>8</sup> But this view of logistics as the domain of military operations is rapidly changing. Private industry has been increasingly involved in the development of a framework logistics processes, based on military models, to improve the efficiency and effectiveness of key business areas such as inventory management, distribution, and transportation. The major distinction

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<sup>7</sup> Kaminski, p.3

<sup>8</sup> " Webster's New World Dictionary of the American Language, Second College Edition, New York, New York: World Publishing Company 1978

between military and business logistics has been in the objectives of the effort -- operational readiness of troops and equipment vs. profit.<sup>9</sup> The logistics principles of Responsiveness, Simplicity, Flexibility, Economy, Attainability, Sustainability, and Survivability<sup>10</sup> are as germane to commercial business operations as they are to military operations. The two branches of logistics -- military and business -- that were once distinct, are quickly merging as the common ground of business practices between the two continues to grow.

Even with the unique objectives and characteristics of the two logistics, there is an emerging similarity and convergence of terminology and concepts that is creating a shared view of logistics that is oriented on just-in-time business processes. An important outcome of this convergence is a better understanding within DOD of the private sector's potential to effectively support military logistics requirements at the strategic and operational levels. The integration of private sector capabilities into military sustainment operations will be vital in responsively supporting a wide range of military missions in a declining funding environment.

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<sup>9</sup> Stephen Hays Russell, Ph.D. "Profiling Military Logistics and Business Logistics: Where Are We Heading?", Logistics Spectrum, Spring 1995, p.38

<sup>10</sup> Joint Publication 4-0, II-1 to II-4.



## **A New Logistics Environment - Cooperative Sustainment**

There is a logistics revolution going on. We are experiencing a radical change in the way we look at logistics. Like most revolutions, it brings with it strong reactions. For instance, if we follow the new approaches to accessing vice holding inventory, many things can be done more simply with less cost. This leads not to encouragement but to considerable skepticism. The argument goes: if it were that easy, we would have done it already. There is a real concern that new approaches are breaking the foundation of the past. The underlying concern, by many, is that the rush to incorporate private sector capabilities into the military environment will cast aside the security and established practices of the past and create uncertain risk.<sup>11</sup> This concern is understandable but it is based largely on a lack of understanding of the potential positive impact of commercial support.

What has happened is that over time, the hard working and creative thinkers inside and outside of the military, faced with a new world of global markets, responsibilities, and leaner budgets, have progressively built a new perspective from which to view logistic sustainment.

New technology and new knowledge about how the interdependent inventory processes work have given the logistics community capabilities

and insights that are leading to radically different solutions. The driving challenge is to obtain and share a clear focus on the real nature of the business processes that we manage and to link them to operational requirements.<sup>12</sup> There must be a comprehensive blue print in order to do this. The outcome will be cooperative sustainment logistics -- a balance between "just-in-case" and "just-in-time" practices that will achieve the intent of the Joint Chiefs of Staff's vision of focused logistics.

### **The Strategy of Cooperative Sustainment**

The strategy of cooperative sustainment starts with the premise that DOD cannot buy and hold all the sustainment materiel that it would like. The orientation of Cooperative Sustainment starts with the perspective of the customer. The customer drives the logistics process. This has always been the case, but more often than not, the customer has not been in the driver's seat of the logistics effort.<sup>13</sup> No company in the private sector could attract customers by offering to fill 85 percent of orders in 28 days in the US and 65 days overseas.<sup>14</sup> The generally accepted defense standards were never measured from the external customers' performance standards; they were measured by standards born from internal processes.

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<sup>11</sup> Wing Commander David J. Foster, RAF, A New Look At Wholesale Logistics, Air Force Journal of Logistics, Fall 1995, p.2

<sup>12</sup> Eden and Dumond, eds. , 709

<sup>13</sup> Foster, p.2

<sup>14</sup> Jeffrey Jones, Logistics Special Report, Logistics Spectrum, Summer 1995, p.28

## Customer Focus

Reestablishing the customer (Unit/Service/Combatant Command) as the foundation of the sustainment process, the base plate of the strategy is set and we can direct the efforts from there.<sup>15</sup> Daily demand for materiel can be met, but the real challenge is the requirement to meet contingency and warfighting requirements by tailoring support and placing required materiel where it is needed fast. To that end the objectives should be:

- Accurate -Timely Inventory and Distribution Information
- Value - Reduced Costs

Responsiveness is: reducing the logistics response time cycle of acknowledged requests, acquiring materiel, preparation for shipment, transportation time, and receipt processing to the customer. The goal is to move inventory requirements nearly as fast as information. Reliability is sustaining a high level of service that meets customer expectations. The key to achieving reliability is the use of information technology. Accurate - timely information on inventory availability is required for day-to-day operation, but it is absolutely essential to support contingency and warfighting planning. Equally important to inventory information is the ability to track the location of materiel along the

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<sup>15</sup> Eden, Dumond eds., p.703

distribution process in near real time. Value is created when the service to the customer is improved and the cost of the service is reduced.

The critical factor that drives DOD is cost, and it is often weighed more heavily than effectiveness. The goal of Cooperative Sustainment is to function within the context of cost cutting, and to measurably improve effectiveness to military operations. The means to accomplish this goal are:

- Third Party Logistics (TPL)
- Inventory Management Support of Secondary Items
- Logistics Command and Control
- Performance Metrics

### Third Party Logistics

TPL is the use of an external organization to perform logistics functions that have customarily been performed internally.<sup>16</sup> The process utilized to integrate TPL into the sustainment process is called *outsourcing*. Outsourcing is the transfer of a function previously performed in-house to an outside provider. Outsourcing is often confused with privatization. The fundamental difference between outsourcing and privatization is distinct. Outsourcing is the contracting out functions and privatization is the transfer of government assets to

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<sup>16</sup> Paula R. Wilcox, Third Party Logistics Services: Their Role and Importance in the 1990s, Logistics Spectrum, Summer 1995, p.53

private industry. In outsourcing, management oversight is retained by the government or commercial agency and in privatization it is not.

The movement to outsource functions to TPLs in the commercial sector has been driven largely by the same forces that are currently driving DOD. In the commercial sector, downsizing and restructuring has been driven by the expanded global market place that requires a leaner operating environment to meet profit margins. In DOD, declining budgets and reduced manpower are forcing a leaner operating environment that must support a global military strategy.

In the private sector, management is focusing on internal "core competencies". Core competencies are those functions that produce the products or services that define the organization. Functions that are not core to the organization are outsourced to TPL organizations who in turn provide those functions as part of their core competencies. Two key TPL capabilities, transportation/distribution support and inventory management support of secondary items (repair parts) must be incorporated into Cooperative Sustainment.

The impact that TPLs have had on the transportation industry are significant and should be incorporated into logistics operations more than they are now. The concept of In Transit Visibility (ITV), the ability to accurately track the movement and location of materiel in shipment, has been made a reality in the transportation world. Companies like

FedEx, Emery Express, and DHL Corporation provide their customers with not only fast efficient transportation and distribution services, but they provide customers with the tools and ITV software, to track the movement of their material through the TPL's system. The customer now has the ITV information at a fraction of the cost required to develop the ability internally.<sup>17</sup> The Defense Logistics Agency uses Federal Logistics Services, a subsidiary of FedEx, to move critical high dollar value materiel world wide with delivery to the customer in three days or less.<sup>18</sup> Granted, not all military requirements can be met by a TPL, but those requirements are becoming the exception rather than the rule.

#### Inventory Management Support of Secondary Items

The requirement to hold inventory at the operational level should be weighted toward critical readiness and long lead time items rather than high demand items -- or those high volume demands that have wide industry availability that can be supported by a TPL. Investment in inventories should be focused on items critical to warfighting that cannot be readily met by commercial operations. The Service inventories should provide the balance between the "*just in-case*" and the "*just-in-time*" materiels. The key principle in Cooperative Sustainment is that operational inventories hold war fighting "show stoppers" and the rest is

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<sup>17</sup> Wilcox, p.54

<sup>18</sup> Sharon Gavin, "FEDEX Keeps Ships Sailing", Dimensions Magazine, Fall 1995

the domain of the TPLs who are contracted to provide the support within specified time frames.

The Defense Logistic Agency (DLA) has implemented regional corporate contracts under the Prime Vendor program. Prime Vendor organizations are under contract to DLA to provide a range of items to customers at set prices within specified times. The transactions between the customer, DLA, and the Prime Vendor organization are conducted via the medium of Electronic Commerce and Electronic Data Interchange (EC/EDI). EC/EDI operations are very fast; hours vice days and soon to be minutes, and they allow the customer to get rapid confirmation of their request and disposition status.

Prime Vendor is geared to high volume common item materiel and is currently used to support subsistence, medical and repair parts. The savings to the Services, monetarily and performance-wise, have been substantial. The potential impact of EC/EDI connecting regional, national and international inventory sources and movement of materiel by rapid response transportation organizations presents a powerful capability that will be fully incorporated into logistics plans at the strategic and operational levels.

#### Logistics Command and Control

At the national level, the Internet is becoming the means to communicate and transact business. The Internet's "virtual mall"

provides instant access to an expanding range of information on services and products. Access to the Internet is inexpensive and can be incorporated into any organization with relative ease. At the operational level, the link to this level of support is through the Global Combat Support System (GCSS). The GCSS is an emerging information technology capability that will provide a world wide web like ability to access, transmit, and receive, logistics information between military and commercial organizations. The GCSS can be accessed through a host of military communication means as well as through private sector communications such as the International Maritime Satellite Transmission (INMARSAT) system. The INMARSAT system has been used extensively by military organizations and it serves as an outstanding adjunct to the emerging GCCS.

#### Performance Metrics

In general, current inventory performance metrics are geared toward measuring performance against internal standards. The customer perspective has been largely a secondary issue. The basic evaluation process revolves around demand satisfaction against established requisitioning objectives. Requisitioning objectives are based on total demands for a given item within a defined period of time against a defined criteria. While this may be a relatively straight forward performance metric for a supply clerk, it may not be useful in meeting



customer requirements because time is the critical element to a customer.

A logistics performance metric that does not have at its heart customer wait time is simply invalid. In the private sector, long customer wait time results in the customer going elsewhere for better service. In government industry, the customer must just wait. The total time required to meet the customer requirement from requisition date to receipt date should be the driving metric. Outsourcing is a key element in meeting the mandate of better-faster-cheaper.

#### Dealing With The Risks

The risks involved in relying on “outside” organizations to perform or support key military functions are always grounds for concern or skepticism. The feeling that private industry will not respond to military needs is generally directed at operational requirements at the extreme end of the spectrum. Private industry has always been a player in sustaining military operations. It has been the bedrock of the sustainment process, and relying on it is not a risk, but there are major risks in applying Cooperative Sustainment across DOD.

They are:

- Lack of a common operating base
- Failure to integrate commercial and Defense Agency capabilities into operational level planning

A common operating environment which accommodates a client server architecture must be developed. The Services are moving rapidly in this area and when an open architecture client server environment is fully integrated into the operational level, the full potential of Cooperative Logistics will be achieved. The hardware architecture is the critical path more so than data standardization. The opportunity to utilize commercially available software to meet the business process functions should be exploited to minimize this risk. A look at common operating environment that exists in industry will provide a valuable guide to resolving this issue in DOD.

Presently, the main effort to integrate commercial capabilities into the logistics sustainment process is taking place at the strategic level. The military services must start looking for potential areas where commercial capabilities can be put to work at the operational level. The failure to require operational level logisticians to evaluate commercial support along with organic capabilities will minimize the impact of Cooperative Sustainment and will constitute its major risk. Historically, outsourcing at the operational level, has been conducted more as a knee jerk reaction than as a carefully thought out process. The result of reactionary outsourcing has produced marginal support to the operational sustainment requirements of commanders. To reverse this reactionary process, it is vital that planners at Service and Unified

Command levels begin to use the vast range of commercial and defense agency services available.

An example of defense agency capability is the Defense Logistics Agency (DLA). DLA can and has provided Deployed Contingency Support Teams (DCST) to support the planning and execution of major operations.<sup>19</sup> The value these teams bring to the operational effort is significant, but often it is DLA that initiates the effort to support. Planned and early integration of DCSTs is an example of the use of outside capabilities to enhance sustainment effort at the operational level. The value of doing so will give planners a better understanding of the government and private sector impact and will overcome the skepticism of factoring commercial support in the operational equation.

#### Comparison of Risks

Each of the sustainment strategies has inherent risks and impacts on logistics support that must be evaluated for their ability to achieve the intent of Focused Logistics as outlined in Joint Vision 2010. In comparing the two sustainment strategies, “just-in-case” verses Cooperative Sustainment, the following key aspects must be evaluated:

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<sup>19</sup> Brigadier General Julian A. Sullivan, Jr., New Logistics Concepts Tested in Haiti, Army Logistician, May-June 1995, p.5

### The Just-In-Case Sustainment:

- Knowledge of available assets ready for issue to support operations
- Direct control (ownership) of assets by commanders
- Risk is assumed based on organizational planning and hedging daily requirements against potential requirements.
- Lack of flexibility and speed on acquiring materiel shaped to specific operational requirements
- Inventory funds are marginalized trading between daily requirements and critical long lead time requirements.
- Significant funding is tied to large facility infrastructure, military supply and distribution personnel.

### Cooperative Sustainment

- Asset availability is based visibility of national or regional inventories vice unit owned organic stocks.
- Investment in organic inventory to meet critical and difficult to obtain items (War Stoppers) vice high demand common items.
- Leveraging commercial distribution and transportation capabilities to reduce distribution time frames and costs.

- Significant potential to reduce facility infrastructure costs and reduction supply and distribution personnel. Potential to increase the “tooth to tail “ ratio.

## **Conclusion**

The course that has been set by our National Security Strategy and National Military Strategy outlines that military forces must be prepared to fight two simultaneous major regional contingencies while addressing any of the twenty-two component function objectives. The challenge to logistically support operations across such a broad spectrum can and will be met. The challenge will be met by combining military and commercial business processes, and by creating new partnerships in which military planners will become more comfortable in drawing upon the commercial sector to meet the challenges of operational logistics requirements. The key to successfully support our military operations both in daily and in the crisis action operations will be met by fully integrating these new partnerships into national and operational strategies. By committing to innovation in logistics support, the foundation will be set to provide military planners at all levels a means of implementing Cooperative Sustainment.

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